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Research

My PhD project focuses on the fluorescent labeling of biocompatible block copolymers (BCP) for bioimaging. New drug delivery systems based on BCP seems to be an interesting alternative to multiple injections or oral medications. Their fluorescent labeling will enable to understand their interactions with biological media such as the degradation, the drug release and the biodistribution in either *in vitro* or *in vivo* experiments. I developed fluorophores bearing specific functions to be covalently bound to BCP avoiding a potential leakage of dyes and its undesirable consequences.

This project is supported by MedinCell SA (2018-2021).

Education/Career

I made a two-year university degree at the Université of Montpellier-Sète where I performed an internship at Institut Charles Gerhardt (ICG – Montpellier) on the development of new Metal Organic Frameworks (MOF). Next, I integrated the European Chemistry, Polymers and Materials School (ECPM) in Strasbourg where I finally graduated in 2018. During these three years, I made my first research internship on the development of a new SEM-EDX procedure for oxide thickness measurements at NXP Semiconductors company in Nijmegen, Netherlands. For my second research internship, I joined Dr. Mayeul COLLOT (Laboratoire de Bioimagerie et Pathologies, Illkirch) where I worked on new fluorescent probes for the drug release assessment and new hybrids nanoparticles. I continued in the same team for my PhD, where I am working in collaboration with a french company, MedinCell. Here, my project is to fluorescently label the different polymeric blocks of their technology, BEPO®. Thanks to this labeling, *in vivo* bioimaging will be performed to visualize the depot and to study its formation and the fate of the components over the time.

Publications

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T. Mukherjee*, R.J. Martinez-Sanchez*, T. K. Fam, **S. Bou**, L. Richert, D. Garnier, Y. Mély, S. Kanvah, A.S. Klymchenko, M. Collot. Near infrared emitting molecular rotor based on merocyanine for probing the viscosity of cellular lipid environments. *Mater. Chem. Front.* (2021) doi:10.1039/D0QM00872A.